WWC Intervention Report U.S. DEPARTMENT OF EDUCATION

# **What Works Clearinghouse**



Early Childhood Education May 29, 2007

# **Curiosity Corner**

# **Program description**

Curiosity Corner is a comprehensive early childhood curriculum designed to help children at risk of school failure because of poverty. The program offers children experiences that develop the attitudes, skills, and knowledge necessary for later school success with a special emphasis on children's language and literacy skills. Curiosity Corner comprises two sets of 38 weekly thematic units,

one for three-year-olds and one for four-year-olds. Each day the program staff present children with learning experiences through sequential daily activities. The program provides training, support, and teaching materials for teaching staff and administrators. Parents are encouraged to participate in children's learning through activities both inside and outside the classroom.

# Research

One study of *Curiosity Corner* met the What Works Clearinghouse (WWC) evidence standards with reservations. The study included 316 three- and four-year-old children from four urban, high poverty school districts in New Jersey. This report focuses on immediate posttest findings to determine the effectiveness of

the intervention.<sup>2</sup> The WWC considers the extent of evidence for *Curiosity Corner* to be small for oral language and for cognition. No studies that met WWC evidence standards with or without reservations addressed print knowledge, phonological processing, early reading/writing, or math.

# **Effectiveness**

Curiosity Corner was found to have no discernible effects on oral language and cognition.

	Oral language	Print knowledge	Phonological processing	Early reading/ writing	Cognition	Math
Rating of effectiveness	No discernible effects	na	na	na	No discernible effects	na

(continued)

- 1. To be eligible for the WWC's review, the Early Childhood Education (ECE) intervention had to be implemented in English, in center-based settings (private child care center, preschools located in public schools, Head Start, or other center-based preschool setting), with children aged three to five or in preschool.
- 2. The evidence presented in this report is based on available research. Findings and conclusions may change as new research becomes available. *Curiosity Corner* is being studied under the Preschool Curriculum Evaluation Research (PCER) Grants administered through the U.S. Department of Education's Institute for Education Sciences. The final PCER reports were not released in time to be reviewed for this report.

	Oral language	Print knowledge	Phonological processing	Early reading/ writing	Cognition	Math
Improvement index <sup>3</sup>	Average: +9 percentile points Range: +1 to +17 percentile points	na	na	na	Average: -7 percentile points	na

na = not applicable

# Additional program information

# **Developer and contact**

Curiosity Corner was developed and is distributed by The Success for All Foundation. Address: Success For All Foundation, Inc., 200 W. Towsontown Boulevard, Baltimore, MD 21204-5200. Email: sfainfo@successforall.org. Web: www.successforall.net/early/early\_curiosity.htm. Telephone: (800) 548-4998, ext. 2372.

### Scope of use

Curiosity Corner is currently implemented in more than 300 sites in 29 states. Curiosity Corner is used in Head Start centers, preschool classes in elementary schools, child care centers, and early childhood education centers, mostly in high poverty neighborhoods.

#### **Teaching**

Curiosity Corner can be implemented in various early childhood settings. Typically, the program has a teacher and an assistant assigned to a class of 15 children. Additional teaching staff are required if some children need special care or have special needs. The teacher's manual and weekly theme guides provide teachers with detailed instructions for the lessons. The program also includes supplies for the instructional activities (themed children's books, manipulatives, and games). Teachers are trained through initial training and follow-up support (workshops and in-class visits by the Success for All Foundation staff).

Curiosity Corner is organized by weekly themes. Daily activities, which are conducted in a sequential order to provide children with active learning experiences, include Greetings and Readings, Clues and Questions, Rhyme Time, Learning Labs, Story Tree, Outside/Gross Motor Play, Snack Time, and Question/Reflection. Although Curiosity Corner is designed to enhance the development of the whole child, it emphasizes children's language and early literacy skills. Parents are encouraged to actively engage in children's learning through various activities both in and out of the classroom, such as home visits, the Home Link Page, a lending library, videos, and classroom activities.

Professional development is provided by the Success for All Foundation staff. The first year of professional development includes an initial two-day training, additional training sessions and ongoing implementation visits, and training at a fall conference for the *Curiosity Corner* Coaches and Facilitators. The second year of professional development includes a day of refresher training, subsequent training sessions and ongoing implementation visits, and training available at experienced sites and conferences for *Curiosity Corner* Coaches.

#### Cost

Teaching materials for *Curiosity Corner* cannot be purchased without participation in training and other professional development activities. The teaching materials cost \$2,825 per class and

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<sup>3.</sup> These numbers show the average and range of student-level improvement indices for all findings across the study.

# **Additional program information** *(continued)*

come with a teacher's manual, 38 weekly theme guides, more than 150 children's trade books, manipulative materials, games, and puppets. The first year of professional development costs on average \$1,516 per classroom and includes initial training and follow-up support. Costs for the second year of professional development were not available.

#### Research

One study reviewed by the WWC investigated the effects of *Curiosity Corner* in a center-based setting. The study (Chambers, Chamberlain, Hurley, & Slavin, 2001) was a quasi-experimental design that met WWC evidence standards with reservations. The study included 316 three-year-old children at private child care centers and four-year-old children at public schools from four urban, high poverty school districts in New Jersey. More than two-thirds of the children were African-American. The authors compared oral language and cognitive outcomes for children in a *Curiosity Corner* intervention group with children in a comparison group that used the classroom's standard early childhood curriculum.

#### **Extent of evidence**

The WWC categorizes the extent of evidence in each domain as small or moderate to large (see the What Works Clearinghouse Extent of Evidence Categorization Scheme). The extent of evidence takes into account the number of studies and the total sample size across the studies that met WWC evidence standards with or without reservations.<sup>4</sup>

The WWC considers the extent of evidence for *Curiosity Cor*ner to be small for oral language and for cognition. No studies that met WWC evidence standards with or without reservations addressed print knowledge, phonological processing, early reading/writing, or math.

# **Effectiveness**

### **Findings**

The WWC review of interventions for early childhood education addresses children's outcomes in six domains: oral language, print knowledge, phonological processing, early reading/writing, cognition, and math. Chambers et al. (2001) addressed outcomes in the oral language and cognition outcome domains. The findings below present the authors' and the WWC-calculated estimates of the size and statistical significance of the effects of *Curiosity Corner* on children's performance.<sup>5</sup>

Oral language. Chambers et al. (2001) analyzed the differences between the *Curiosity Corner* and comparison groups for two measures [Mullen Scales of Early Learning (MSEL) Expressive Language scale and MSEL Receptive Language scale] in this outcome domain. The differences between the intervention

and comparison groups were not statistically significant for either outcome as calculated by the WWC; the average effect was neither statistically significant nor large enough to be considered substantively important according to WWC criteria (that is, at least 0.25). In the oral language domain, this study showed no discernible effects, according to WWC criteria.

Cognition. Chambers et al. (2001) analyzed the differences between the *Curiosity Corner* and comparison groups for one measure (MSEL Visual Reception scale) in this outcome domain. The difference between the intervention and comparison groups was not statistically significant or large enough to be considered substantively important as calculated by the WWC (that is, at least 0.25). In the cognition domain, this study showed no discernible effects, according to WWC criteria.

- 4. The Extent of Evidence categorization was developed to tell readers how much evidence was used to determine the intervention rating, focusing on the number and sizes of studies. Additional factors associated with a related concept, external validity, such as children's demographics and the types of settings in which studies took place, are not taken into account for the categorization.
- 5. The level of statistical significance was reported by the study authors or, where necessary, calculated by the WWC to correct for clustering within class-rooms or schools and for multiple comparisons. For an explanation about the clustering correction, see the <a href="https://www.wwc.number.com/wwc-conducted-computations">www.wwc.number.com/wwc-conducted-computations</a> for the formulas the WWC used to calculate the statistical significance. In the case of <a href="https://www.correction.com/wwc-conducted-computations">correction.com/wwc-conducted-computations</a> for the formulas the WWC used to calculate the statistical significance. In the case of <a href="https://www.correction.com/wwc-conducted-computations">correction.com/wwc-conducted-computations</a> for the formulas the WWC used to calculate the statistical significance. In the case of <a href="https://www.correction.com/wwc-conducted-computations">correction.com/wwc-conducted-computations</a> for the formulas the WWC used to calculate the statistical significance. In the case of <a href="https://www.correction.com/wwc-conducted-computations">correction.com/wwc-conducted-computations</a> for the formulas the WWC used to calculate the statistical significance. In the case of <a href="https://www.correction.com/wwc-conducted-computations">correction.com/wwc-conducted-computations</a> for the formulas the www.

# **Effectiveness** (continued)

# **Rating of effectiveness**

The WWC rates the effects of an intervention in a given outcome domain as positive, potentially positive, mixed, no discernible effects, potentially negative, or negative. The rating of effectiveness takes into account four factors: the quality of the

research design, the statistical significance of the findings,<sup>5</sup> the size of the difference between participants in the intervention and the comparison conditions, and the consistency in findings across studies (see the WWC Intervention Rating Scheme).

# The WWC found Curiosity Corner to have no discernible effects for oral language and cognition

# Improvement index

The WWC computes an improvement index for each individual finding. In addition, within each outcome domain, the WWC computes an average improvement index for each study and an average improvement index across studies (see <a href="Technical">Technical</a> Details of WWC-Conducted Computations). The improvement index represents the difference between the percentile rank of the average student in the intervention condition versus the percentile rank of the average student in the comparison condition. Unlike the rating of effectiveness, the improvement index is based entirely on the size of the effect, regardless of the statistical significance of the effect, the study design, or the analyses. The improvement index can take on values between

-50 and +50, with positive numbers denoting results favorable to the intervention group.

The average improvement index for oral language is +9 percentile points in the study, with a range of +1 to +17 percentile points across findings. The improvement index for cognition is -7 percentile points for the one outcome in the study.

# **Summary**

The WWC reviewed one study on *Curiosity Corner* and it met WWC evidence standards with reservations. Based on this single study, the WWC found no discernible effects for oral language or cognition. The evidence presented in this report may change as new research emerges.

# Reference

#### Met WWC evidence standards with reservations

Chambers, B., Chamberlain, A., Hurley, E. A., & Slavin, R. E. (2001, April). *Curiosity Corner: Enhancing preschoolers'*language abilities through comprehensive reform. Paper presented at the Annual Meeting of the American Educational Research Association, Seattle, WA.

For more information about specific studies and WWC calculations, please see the <u>WWC Curiosity Corner</u> Technical Appendices.

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